

ings. For the purposes of damp this need not be very deep, perhaps not exceeding a foot high. As soon as the footings and lower part of the wall are carried as high as the level of the ground inside, it will be well to introduce a thin sheet of lead the whole thickness of the wall, or a layer of bituminous substance as thin as possible, so as to penetrate the brick and stone and fill the pores, or a double course of thick slate set in cement.

The purpose of the sheet of lead and of the bituminous substance, and the slating, is to prevent the wet from rising up from the footings. But other precautions are necessary to prevent the access of damp from the surface of the ground next the outside face of the wall. A facing of stone is the best remedy. It need not be very thick, but it is well for it to be at least two or three feet high, and if a small interval be left between this facing slab and the outside surface of the wall, so much the better, providing a circulation of air be kept up in the space. By this provision neither the rain beating against this part of the wall, nor the water returning from the pavement or ground, will be able to reach the main substance of the wall; for although the facing slabs may be temporarily damped, they will soon be dried without communicating the damp to the body of the wall.

The inside of external walls should never have the plastering applied immediately on the face. They should be battened by means of long narrow slips of wood, attached by hold-fasts to the inside face of the wall. These slips or battens receive the laths upon which the plastering is applied. The space formed by the battens between the wall and the lathing effectually keeps out the humidity.

No impervious covering should be laid on wooden floors in the lowermost story, such as oil-cloth, for instance; a certain moist air always rises from the ground, and escapes through the joints of the boards, but if this be intercepted by an oil-cloth, the air will rot the boards and oil-cloth in a very few months.

But it is important to keep the damp from the floors which come upon the ground, that is, the floors of the lowermost story. It is evident that the timber or stone slabs should not be in immediate contact with the soil; for this purpose, let a stratum of concrete be laid over the whole surface of the house, six or nine inches thick at the least. Upon this form sleeper walls or piers up to the necessary height, and no them lay the plates or paving slabs; as an additional precaution, a thin sheet of lead might be laid under each pier on the bed of the sleeper walls. In palaces, as a greater precaution, and in buildings where expense is a secondary object, a thickness of asphalt might be laid on the concrete. In the dwellings of the poor it is expedient at all events, to have the sleeper walls or piers, which need be only half brick wide, and one course high, without the cement, and generally that will be a sufficient precaution; where stone paving forms the floor, bricks must be laid under all the joints. Thus will the humidity be more or less prevented from reaching the floors.

But of all precautions to prevent damp entering by the face of the wall, the best remedy is to have so area, which, by keeping the soil at a distance, precludes its fatal effects on the wall. These areas may be three or more feet wide, and may serve as a passage all round the building, and afford access to cellars outside, as in the London houses; or if this, from want of space or the expense, be impracticable, it will be sufficient to have what are called blind areas, with convex walls against the earth, the points of contact with the outer wall of the house being as small as possible, to diminish the possibility of the communication of damp. Care must be taken to leave openings at AAA (fig. 2), so as to maintain a draft or circulation of air throughout the several areas; and to render this circulation perfect it will be requisite to form in the wall three or four shafts, as BB (fig. 1), to keep up a communication with the outer air. It is necessary to leave the angle C, quite free and clear, for the angle at C being a solid mass, requires the greater exposure, that it may throw off the damp, which it originally acquired by exposure to the atmosphere, as it tends to make it evaporate. The top of the areas must be covered by stone slabs, which it is desirable to keep above the surface, and the face of the wall immediately above should be rendered with cement. If it be necessary to

have the covering slabs below the earth, the face of the wall must be rendered with cement, or the damp will undoubtedly penetrate through the wall from the slightest depth of ground next to it.

Another precaution must always be taken in regard to floors, and that is, to insert in the outer walls iron gratings, with channels in the wall, say 9x6, so as to let air pass into the floor from the outside; and in order to exclude the air from the floor in winter time, or in the event of damp weather, it is well to prepare a sliding plate to the skirting, which may shut it off or open the holes for the re-admission of the air, as the one or the other effect may be desired.

Dripping eaves and rain-water shoots or gurgols, without standard pipes, should always be avoided; for the water, which falls from the eaves, or gushes from the projecting spouts or shoots, is driven against the face of the wall ere it falls a few feet, and keeps the brick or stone-work saturated at times with the water. Hence eaves-gutters, and standard rain-water pipes are always indispensable, and a proper shoe at the foot of the pipe should never be omitted, otherwise the force of the water causes it to undermine the wall, producing the most disastrous results, whereas a shoe keeps the water from the wall, and turns it into a drain prepared to receive it.

CONSIDERATIONS WITH RESPECT TO FEES TO DISTRICT SURVEYORS.

Sir,—Is it too late to offer a suggestion in connection with the amendments of this Act;—an Act which, by the way, has in my opinion been brought to some extent into undeserved disrepute? The present system of requiring the builder, to pay large fees to the district surveyor personally, has a tendency to produce a bad feeling, on the part of the builder, against the district surveyor, the consequence of which is an inclination to run counter to the district surveyor, and also to evade his superintendence; and which ends, in many cases, in litigation, to the prejudice of the Act which it is his duty to enforce. That a vigilant officer of inspection is required, to see the directions and restrictions of this important Act properly and uniformly observed, seems to require no better proof than is afforded by the number of cases of irregularity which, published documents inform us, have been prosecuted by the several district surveyors since the Act came into active operation, after making every allowance for the obtuse character of some of its prescriptions. With a view to relieving the district surveyor, in some measure, from the objectionable duty of exacting fees from the builder, I would propose that no fees (except merely nominal fees) be payable by the builder to the district surveyor; but that, in lieu of this system, the fees due to district surveyors should be raised by some new rate, or by increasing some one or more of the present rates; the district surveyor receiving, as at present, a fee on each individual work, from the parties authorized to disburse such moneys. It may here be urged as an objection, that the party arranging the district surveyor's account, would not be capable of judging of its fairness. To meet this, it would be necessary that such account should be audited at the office of the official referees; the periodical returns of the surveyor being kept for this purpose according to a form to be prescribed by law, making a heavy penalty the consequence of exacting any fee wrongfully. Another difficulty may possibly be anticipated here, viz.: that the builder, not being any longer interested in the amount of fees, might be instrumental in unduly swelling the district surveyor's account, by the service of a multiplicity of notices. To obviate this apparent difficulty, it may here be necessary also to impose heavy penalties in case of contrivance; and, further, in every instance, still to make some nominal fee payable by the builder to the district surveyor, and this, too, at the time of serving the notice to begin. The inconvenience of waiting the expiration of his notice (always a source of annoyance to the builder, but which should then be strictly insisted on), would also tend to lessen this difficulty. Again, with a view of ensuring a fair and equitable audit of the periodical returns, a general surveyor should be appointed (to be paid by a fund to be raised in the districts

jointly), to make periodical visits to the several districts, to satisfy himself, especially as it regards extraordinary works—that is to say, any operations except the erection of new buildings—as to the propriety of the district surveyor's demand; and to facilitate this examination, the district surveyor should be required to furnish to the official referees a duplicate of his receipt, for the preliminary fee, and of his certificate, to the builder, vouching for the conformable nature of the works to the Act, on the completion of the works—a form which is not now adopted; but which would then be a great check on any irregular proceedings.

It may be urged against this scheme, that the community at large are not sufficiently interested in this matter to allow of the adoption of the proposed law; but it should be remembered by objectors, that the more important and primary objects of the statute seem to be, the security and comfort of the public.

I am, Sir, yours, as heretofore,
London; May, 1846.

Symonds.

NOTES IN THE PROVINCES.

A joint parochial cemetery for all the parishes in Cambridge, except St. Giles's and St. Peter's, is about to be constructed.—A new parish church is to be erected at Burslem.—The Bible Christians at Morrhad Bishop laid the foundation stone of a new chapel on the 11th ult.—The church spire at Chester-le-street, Durham, has been struck by lightning, and much shattered.—The first stone of St. Paul's church, Hull, will be laid on the 19th inst. Endeavours are being made to convert the ground, formerly the site of the Spring Ditch, into a promenade, and plant it with trees.—Mr. Barry, we are told, has been recently authorized by the Scarborough, Cliff Bridge Committee to proceed with the erection of the sea-wall from the spa to the bridge.—The Grimsby dock works are in rapid progress.—The Manchester baths and wash-houses, in Miller-street, are to be fitted up with a supply of eighteen baths, and twenty-six troughs for linen-washing; the Manchester and Salford water-works to supply the water.—Muspratt's great brick chimney at Liverpool, lately saved its proprietors the trouble and expense of taking it down, as was intended, by toppling to the ground within the small yard in which it stood. It is thought that the chemical vapours constantly passing through it had injured the materials or destroyed their cement. A new chimney stalk is to be erected on its site, but not one of equal dimensions with the former, which was thirty feet diameter at the base.—Another new church is in progress in the Vale of Neath, parish of Lantwit.—An engineer has been lately preparing the way for the improvements at Holyhead harbour.—Public rooms for literary, scientific, and commercial purposes are about to be erected at Gloucester, including a museum, library, and theatre.—A museum at Chelmsford is also talked of.—The vicinity of Bedminster-bridge has been of late considerably improved by the heating and resalting company. It is proposed to erect the cattle market on the site of the ruins which still disfigure that part of the town.—The people of Taunton seem to require to be reminded of their intention to establish public baths there.—The first stone of the British school-room at Tiptree-heath was laid on Monday week.—The Wrexham new market is to be in the Tudor style, after a design by Mr. Thomas Pennon, surveyor for the county of Denbigh; it includes room for a corn exchange, &c. The estimate is 5,000l.—The water-works at Hales are likely to be soon carried into execution on the plan of Mr. C. D. Hustler.—The Wesleyan Methodist chapel at Tisbury was opened on the 10th ult.—The first stone of the Cantley schools was laid on the 26th ult.—Mr. Lardner, cotton-spinner, Preston, has the credit of recently erecting a bath-room for his working people, including warm and vapour baths and shower bath, all fitted up in a comfortable style, with every requisite.—The select committee on the Edinburgh water-works have reported that the introduction of the bills both of the Edinburgh and of the Leith water-company, should be suspended till a bill for the supply of water to Edinburgh and Leith, under a public trust, be introduced, and passed, if possible, during the present session.